

What is claimed is:

1. A handover processing method for a mobile communication system, the method comprising:

requesting a radio link set to a radio network controller (RNC);

performing a backup of a present radio link set and changing the present radio link set, when the radio link set request is provided;

transmitting a radio link set completion message to the RNC;

checking whether a reply signal in response to the radio link set completion message is received; and

reverting the changed radio link set back to the backed-up radio link set when the reply signal is not received from the RNC within a certain time duration.

2. The method of claim 1, wherein the reverting step includes the sub-steps of:

checking whether the reply signal is received within a second time duration;

retransmitting the radio link set completion message when the reply signal is not received within the second time duration;

checking whether the reply signal is received within a first time duration after the retransmitting sub-step; and

reverting the radio link set to the backed-up radio link set when the reply signal is not received within the first time duration.

3. The method of claim 2, wherein the first time duration is the same as or greater than a sum of the second time duration and the retransmission time.

4. A handover processing method for a mobile communication system, the method comprising:

starting a handover procedure;

requesting a radio link set to a radio network controller (RNC) when the handover procedure starts;

performing a backup of a present radio link set and changing the present radio link set when the radio link set request is approved;

operating a first timer after the changing step;

transmitting a radio link set completion message to the RNC and waiting for a reply signal in response to the radio link set completion message;

reverting the changed radio link set back to the previous backed-up radio link set when the reply signal is not received and the first timer has expired; and

finishing the handover procedure.

5. The method of claim 4, wherein, if the reply signal is received before the first timer expires, the finishing step is performed by bypassing the reverting step.

6. The method of claim 4, wherein the first timer is operated at a RRC (radio resource control) layer of a user equipment.

7. The method of claim 4, further comprising:
retransmitting the radio link set completion message when the reply signal is not received for a certain time.

8. The method of claim 7, wherein the retransmitting step includes the sub-steps of:

transmitting the radio link set completion message and operating a second timer;

checking whether the reply signal is received within an operation time of the second timer;

retransmitting the radio link set completion message when the reply signal is not received even though the second timer has expired; and

checking whether the reply signal is received within an operation time of the first timer.

9. The method of claim 8, wherein the second timer is operated at a radio link control (RLC) layer of a user equipment.

10. The method of claim 8, wherein the operation time of the first timer is the same as or greater than a sum of the operation time of the second timer and the retransmission time.

11. A handover processing method for a mobile communication system, the method comprising:

requesting a radio link set to a radio network controller (RNC);

performing a backup of a present radio link set when the radio link set request is approved;

changing the present radio link set and operating a first timer;

transmitting a radio link set completion message to the RNC and operating a second timer;

checking whether a reply signal in response to the radio link set completion message is received from the RNC;

retransmitting the radio link set completion message when the reply signal is not received and the second timer has expired; and

reverting the changed radio link set back to the backed-up radio link set when the reply signal is not received and the first timer has expired.

12. The method of claim 11, wherein when the reply signal is received during the first or second timer operation time, the reverting step is bypassed and the handover processing is completed.

13. The method of claim 11, wherein the first timer is operated at a radio resource control (RRC) layer of a user device.

14. The method of claim 11, wherein the second timer is operated at a radio link control (RLC) layer of a user device.

15. The method of claim 11, wherein the operation time of the first timer is the same as or greater than a sum of the operation time of the second timer and the retransmission time.

16. A method of preventing abnormal handover operation, the method comprising:

modifying a current radio link set at a user device and then transmitting a completion message to a network device;

checking whether a response signal in response to the completion message is received at the user device; and

reverting the modified radio link set to a backup radio link set if the reply signal is not received within a first time duration.

17. The method of claim 16, wherein, in the checking step, the response signal is an acknowledgment signal from the network device that acknowledges a receipt of the completion message.

18. The method of claim 17, wherein the network device is a radio network controller in a mobile communication system.

19. The method of claim 16, wherein, the checking step, the response signal is a confirmation signal that confirms a receipt of an acknowledgement signal from the network device, the acknowledgment signal acknowledging a receipt of the completion message.

20. The method of claim 19, further comprising:

checking whether the acknowledgement signal is received within a second time duration; and

retransmitting at least once the completion message to the network device if no acknowledgement signal is received during the second time duration.

21. The method of claim 20, wherein the first time duration is equal to or greater than a sum of the second time duration and a total retransmission time at the retransmitting step.

22. The method of claim 19, wherein the network device is a radio network controller in a mobile communication system.

23. The method of claim 16, wherein a timer at a radio resource control layer of the user device controls the first time duration.

24. The method of claim 20, wherein first and second timers at a radio resource control layer of the user device control the first and second time durations, respectively.